

WHAT IS CLAIMED IS:

1. A conditioning disk comprising:
a substrate having top and bottom surfaces;
a plurality of abrasive particles arranged on at least a portion of said
5 top substrate surface, said abrasive particles affixed to said substrate with a
matrix material; and
a carrier affixed to said bottom substrate surface,
wherein said carrier comprises at least one of synthetic plastic or ceramic.
- 10 2. The conditioning disk of claim 1 wherein said abrasive particles
comprise at least one of aluminum oxide, cubic boron nitride, or diamond.
3. The conditioning disk of claim 1 wherein said matrix material
comprises at least one of aluminum, boron, carbon, chromium, tungsten, cobalt,
15 titanium, zinc, iron, manganese, or silicon.
4. The conditioning disk of claim 1 further comprising a corrosion
resistant powder.
- 20 5. The conditioning disk of claim 1 wherein said substrate is formed of
said matrix material.
6. The conditioning disk of claim 1 wherein said substrate is more
flexible than said carrier.
- 25 7. The conditioning disk of claim 1 wherein said carrier is affixed to
said substrate with an adhesive.
8. The conditioning disk of claim 1 wherein said abrasive particles are
30 arranged in a predetermined pattern.

9. The conditioning disk of claim 1 wherein said matrix material comprises a brazing alloy.

10. The conditioning disk of claim 9 wherein said abrasive particles are
5 diamond and said brazing alloy comprises at least one of chromium, tungsten, cobalt, titanium, zinc, iron, manganese, or silicon.

11. The conditioning disk of claim 9 wherein said abrasive particles are
cubic boron nitride and said brazing alloy comprises at least one of aluminum,
10 boron, carbon, or silicon.

12. The conditioning disk of claim 9 wherein said abrasive particles are
aluminum oxide and said brazing alloy comprises at least one of aluminum, boron,
carbon, or silicon.

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13. A conditioning disk comprising:
a substrate having top and bottom surfaces;
a plurality of abrasive particles arranged on at least a portion of said
top substrate surface, said abrasive particles affixed to said substrate with a
20 matrix material; and
a polycarbonate carrier affixed to said bottom substrate surface.

14. The conditioning disk of claim 13 wherein said abrasive particles
comprise at least one of aluminum oxide, cubic boron nitride, or diamond.

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15. The conditioning disk of claim 13 wherein said matrix material
comprises at least one of aluminum, boron, carbon, chromium, tungsten, cobalt,
titanium, zinc, iron, manganese, or silicon.

16. The conditioning disk of claim 13 further comprising a corrosion
30 resistant powder.

17. The conditioning disk of claim 13 wherein said carrier is affixed to said substrate with an adhesive.

18. The conditioning disk of claim 13 wherein said abrasive particles
5 are arranged in a predetermined pattern.

19. The conditioning disk of claim 13 wherein said matrix material comprises a brazing alloy.

20. The conditioning disk of claim 19 wherein said abrasive particles
10 are diamond and said brazing alloy comprises at least one of chromium, tungsten, cobalt, titanium, zinc, iron, manganese, or silicon.

21. The conditioning disk of claim 19 wherein said abrasive particles
15 are cubic boron nitride and said brazing alloy comprises at least one of aluminum, boron, carbon, or silicon.

22. The conditioning disk of claim 19 wherein said abrasive particles
20 are aluminum oxide and said brazing alloy comprises at least one of aluminum, boron, carbon, or silicon.

23. A conditioning disk comprising:
a substrate having top and bottom surfaces;
a plurality of abrasive particles arranged on at least a portion of said
25 top substrate surface, said abrasive particles affixed to said substrate with an electroplated metal; and
a carrier affixed to said bottom substrate surface,
wherein said carrier comprises at least one of synthetic plastic or ceramic.

24. The conditioning disk of claim 23 wherein said carrier comprises
30 polycarbonate.

25. The conditioning disk of claim 23 wherein said abrasive particles
comprise at least one of aluminum oxide, cubic boron nitride, or diamond.

26. The conditioning disk of claim 23 wherein said electroplated metal
5 comprises nickel.

27. The conditioning disk of claim 26 wherein said abrasive particles
are diamond.

10 28. The conditioning disk of claim 23 wherein said substrate is formed
of said electroplated metal.

29. The conditioning disk of claim 23 wherein said carrier is affixed to
said substrate with an adhesive.
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30. The conditioning disk of claim 23 wherein said abrasive particles
are arranged in a predetermined pattern.